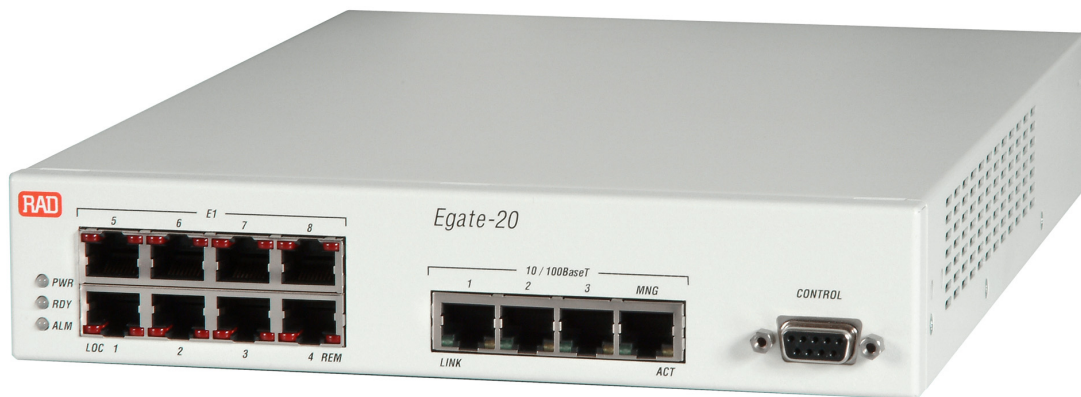


Egate-20

Ethernet over E1/T1 Gateway



FEATURES

- Aggregates and switches Fast Ethernet traffic over E1 or T1 circuits
- Up to eight E1 or T1 ports to support up to eight remote locations
- Transparent forwarding of Ethernet user traffic
- Secure management using VLAN stacking and stripping
- Transparent MAC forwarding without processing MAC addresses
- Up to three 10/100BaseT ports and one out-of-band management port
- Three-level QoS according to VLAN priority (802.1p), DSCP and physical port, allowing traffic separation and prioritization
- E1/T1 and Ethernet statistics collection for enhanced performance monitoring and troubleshooting
- Inband and out-of-band management access via:
 - ASCII terminal / Telnet
 - Web browser using ConfiguRAD
 - SNMP using RADview Lite

DESCRIPTION

- Egate-20 is an Ethernet over E1 or T1 gateway. The device concentrates and switches Ethernet traffic received from up to eight remote locations connected over eight E1 or T1 circuits, and transmits the traffic to the packet network.
- Typical applications include Ethernet VPN services over E1 or T1 lines, or aggregation of enterprise LANs over E1 or T1 circuits (see *Figure 1*).
- Using Egate-20, service providers can offer transparent LAN services. VLAN tagging or VLAN stacking allows all user traffic to be transported transparently while keeping all user VLAN settings intact.
- When using Egate-20 in conjunction with RAD's RIC and FCD CPEs, service providers can offer a complete LAN access solution.

Egate-20

Ethernet over E1/T1 Gateway

- Optimized for Ethernet over PDH access, Egate-20 reduces equipment costs and simplifies network maintenance.
- Egate-20 allows up to three 10/100BaseT ports to be used for connecting the service provider to the packet switched network (PSN), and eight E1 (balanced/unbalanced) or T1 ports for connecting the remote subscribers to the service provider.
- Traffic can be classified into three priority queues according to VLAN priority (802.1), DSCP and physical port. Higher priority can be assigned to real-time applications, such as voice and video.
- The unit can be managed using different ports and applications:
 - Local out-of-band management via an ASCII terminal connected to the RS-232 port
 - Remote out-of-band management via the dedicated 10/100BaseT port
 - Remote inband management via the Fast Ethernet or TDM ports. Remote management is performed using Telnet, Web browser or RADview Lite, RAD's SNMP-based element management system.
- Management traffic and user Ethernet traffic are transported together on the same Ethernet stream, separated by different VLANs, ensuring management security.

APPLICATION

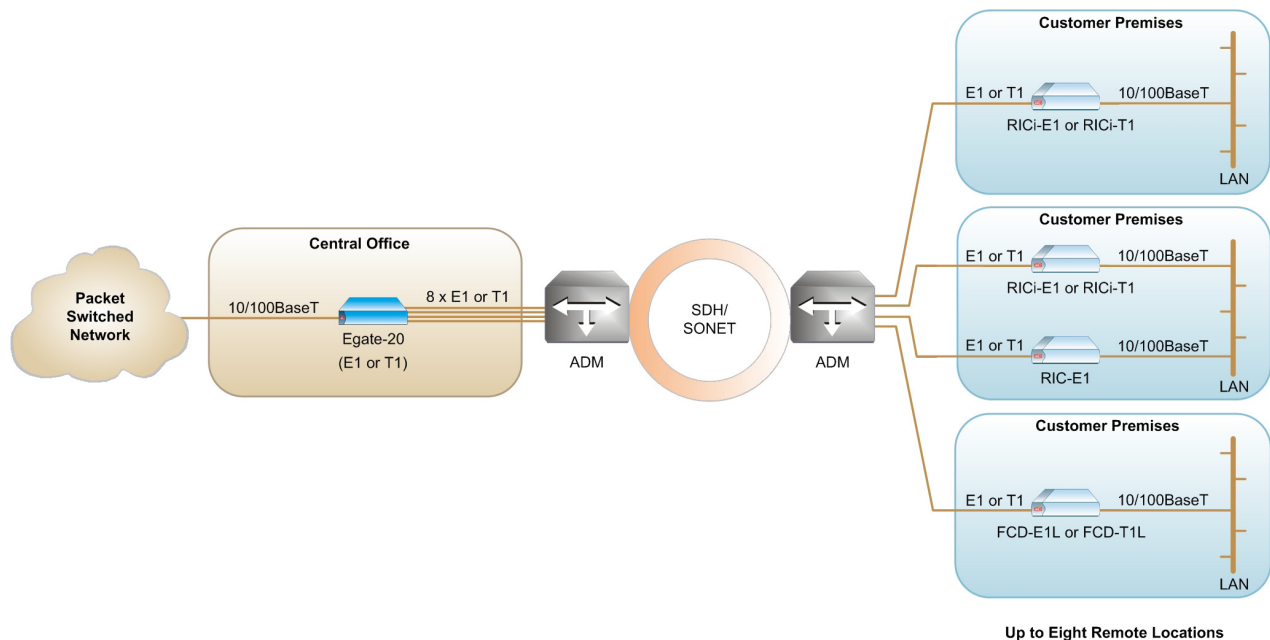


Figure 1. Typical Application

SPECIFICATIONS

E1 INTERFACE

- **Number of Ports**
8
- **Compliance**
G.703
- **Framing**
Unframed
- **Data Rate**
2.048 Mbps
- **Line Coding**
HDB3
- **Line Impedance**
 - 120 Ω , balanced
 - 75 Ω , unbalanced (via an optional adapter cable)
- **Diagnostics**
Remote and local loopback
- **Connector**
RJ-45, Coaxial

T1 INTERFACE

- **Number of Ports**
8
- **Compliance**
ANSI T1.403
- **Data Rate**
1.544 Mbps
- **Line Code**
B8ZS
- **Framing**
Framed: D4, ESF
- **Line Impedance**
100 Ω , balanced
- **Diagnostics**
Remote and local loopback
- **Connector**
RJ-45

FAST ETHERNET INTERFACE

- **Number of Ports**
 - User ports: 3
 - Out-of-band management: 1
- **Compliance**
10/100BaseT, conforms to the relevant sections of IEEE 802.3 and 802.3u, 802.1p and 802.1Q
- **Data Rate**
100 Mbps
- **Max. Frame Size**
1536 bytes
- **Supported Modes**
Autonegotiation, full/half duplex, flow control
- **Connector**
RJ-45

WAN PROTOCOL

- **Type**
HDLC-like framing

INTERNAL BRIDGE

- **LAN Table**
Up to 2,048 MAC addresses (learned)
- **Operation Modes**
VLAN-aware, VLAN-unaware
- **Filtering and Forwarding**
Transparent or filter

CONTROL PORT

- **Interface**
RS-232/V.24 (DCE asynchronous)
- **Data Rate**
9.6, 19.2, 115.2 kbps
- **Connector**
9-pin, D-type, female

GENERAL

- **Indicators**
 - PWR (green)
 - On: Egate-20 is powered on
 - Off: Egate-20 is powered off
 - READY (green)
 - On: Initialization has been completed
 - Off: Self test or diagnostics is in progress
 - ALM (red)
 - On: Interface alarm is detected
 - Off: No alarm is detected
 - 10/100 Link (green)
 - On: ETH link is up
 - Off: ETH link is down
 - 10/100 ACT (yellow)
 - Blinking: Ethernet frame has been received or sent within the last second
 - Off: No frame has been received or sent within the last second
 - E1/T1 LOC (red)
 - On: Local synchronization loss is detected
 - Off: Local synchronization is OK
 - T1 REM (yellow)
 - On: Remote synchronization loss has been detected
 - Off: Remote synchronization is OK
- **Power**
 - AC: 100 to 240 VAC ($\pm 10\%$), 50 to 60 Hz
 - DC: -48 VDC nominal
- **Power Consumption**
9W max
- **Environment**
 - Temperature: 0 $^{\circ}$ -50 $^{\circ}$ C/32 $^{\circ}$ -122 $^{\circ}$ F
 - Humidity: Up to 90% non-condensing
- **Physical**
 - Height: 43.7 mm / 1.7 in (1U)
 - Width: 215.9 mm / 8.5 in
 - Depth: 300.0 mm / 11.8 in
 - Weight: 2.2 kg / 4.7 lb

Egate-20

Ethernet over E1/T1 Gateway

ORDERING

Egate-20*/&

Ethernet over E1/T1 gateway

- * Specify power supply type:
AC for 100–240 VAC
48 for -48 VDC

- & Specify interface type:
E1 for balanced E1 interface
E1U for unbalanced E1 interface
T1 for T1 interface

Note: Unbalanced E1 interface is provided via an adapter cable (CBL-RJ45/2BNC/E1, see Supplied Accessories below).

SUPPLIED ACCESSORIES

- Technical documentation CD
- Power cord
- AC/DC adapter plug (if a DC-powered unit is ordered)
- CBL-RJ45/2BNC/E1
Interface adapter for converting a balanced E1 RJ-45 connector to a pair of BNC unbalanced coaxial connectors (if an unbalanced E1 interface is ordered)

OPTIONAL ACCESSORIES

- RM-35
Hardware kit for mounting one or two Egate-20 units into a 19-inch rack



data communications

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